

What is claimed is:

1. An optical communication system comprising:

a transmitter configured to transmit a plurality of optical signals over an optical information channel, each of said signals being at an associated wavelength in a range from about 1560 nm to about 1630 nm; and

a receiver configured to receive said plurality of optical signals.

2. A system according to claim 1, wherein said optical information channel comprises at least one optical amplifier configured to amplify said range of wavelengths.

3. A system according to claim 2, wherein said optical amplifier is a Raman amplifier pumped at a wavelength between about 1480 nm and about 1520 nm.

4. A system according to claim 2, wherein said optical amplifier is an erbium doped fiber amplifier.

5. A system according to claim 1, wherein said optical information channel spans at least 2,000 km between said transmitter and said receiver.

6. An optical communication system comprising:

a transmitter configured to transmit a plurality of optical signals over an optical information channel, each of said signals being at an associated wavelength in a range from about 1560 nm to about 1630 nm, said optical information channel comprising at least one optical amplifier configured to amplify said range of wavelengths; and

a receiver configured to receive said plurality of optical signals,

said optical information channel spanning at least 2,000 km between said transmitter and said receiver.

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7. A system according to claim 6, wherein said optical amplifier is a Raman amplifier pumped at a wavelength between about 1480 nm and about 1520 nm.

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8. A system according to claim 6, wherein said optical amplifier is an erbium doped fiber amplifier.

9. A method of transmitting a plurality of data signals on an optical information channel comprising:

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modulating each of said data signals onto an associated wavelength in a range between about 1560 nm and about 1630 nm, and transmitting each said wavelength on said optical information channel.

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10. The method of claim 9 further comprising:  
regenerating said data signals after said data signals travel at least 2,000 km from a transmitter.